

EXHIBIT 2

1 UNITED STATES DISTRICT COURT
2 EASTERN DISTRICT OF TENNESSEE

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4 ULTIMA SERVICES CORPORATION,
5 Plaintiff,
6 No. 2:20-cv-00041-DCLC-CRW
7 -against-

8 U.S. DEPARTMENT OF AGRICULTURE, U.S.
9 SMALL BUSINESS ADMINISTRATION, SECRETARY
10 OF AGRICULTURE, and ADMINISTRATOR OF THE
11 SMALL BUSINESS ADMINISTRATION,

12 Defendants.

13 - - - - -x

14 March 7, 2022
15 10:03 a.m. (EST)

16 DEPOSITION of Dr. Jon Wainwright, the
17 Expert Witness in the above-entitled
18 action, held at the above time and place,
19 taken before Garry J. Torres, a
20 Stenographer and Notary Public of the
21 State of New York, pursuant to the Federal
22 Rules of Civil Procedure, Notice and
23 stipulations between Counsel.

24 * * *

<p style="text-align: right;">Page 6</p> <p>1 A. 4109 Avenue F, Austin, Texas 2 78751. 3 Q. How old are you, sir? 4 A. 58. 5 Q. And you're now retired; is that 6 right? 7 A. Semi-retired, yes. 8 Q. Maybe you could describe for us 9 what semi-retired is -- 10 A. I retired -- 11 Q. -- and how I can aspire to it? 12 A. I retired from NERA National 13 Economic -- NERA Economic Consulting in 14 2018, the end of 2018, but as obvious from 15 today I'm still doing some consulting work 16 occasionally, but mostly retired. 17 Q. Okay. There's a number of 18 articles on your CV. Have any of them 19 been published in peer review journals? 20 A. I don't believe so. Is there 21 any in particular you're referring to? 22 But I don't believe so. 23 Q. Okay. So you -- in 1995 started 24 as a consultant at NERA; is that right? 25 A. Yes.</p>	<p style="text-align: right;">Page 8</p> <p>1 general terms what kind of economic 2 analysis you did for NERA? 3 A. Yeah. As it says on my CV I was 4 a principal investigator on matters 5 involving discrimination, economic 6 damages, statistical liability, class 7 discrimination and employment 8 discrimination cases, wrongful termination 9 cases, contracting discrimination cases 10 and related matters. 11 Q. Okay. Can you give us 12 approximate percentage of your time that 13 you were doing economic analysis related 14 to lawsuits? 15 A. That's tough to quantify. Some 16 engagements were taken on in anticipation 17 of potential litigation that never ended 18 up arising. So if you mean actual 19 litigation, I'm not sure I can give you a 20 precise percentage. 21 Q. Okay. Would you say most? 22 A. No. 23 Q. Okay. More than half? 24 A. I would say no because many 25 cases that could have resulted in</p>
<p style="text-align: right;">Page 7</p> <p>1 Q. And at that time you were still 2 in your own company doing work as well; is 3 that right? 4 A. Yes. 5 Q. And you were still teaching at 6 University of Texas? 7 A. Not by '95 I don't think. 8 Q. Okay. Well, you were -- your 9 résumé says that you were a research 10 associate professor from '92 to '98 at the 11 LBJ school of public affairs; is that 12 accurate? 13 A. That's accurate. 14 Q. But you weren't teaching, is 15 that the mistake I made? 16 A. That was not a teaching 17 position, that's correct. 18 Q. Okay. And then in 1998 did you 19 move to NERA full time? 20 A. Yes. 21 Q. And you worked there steadily 22 until the end of 2018 and now working as a 23 consultant thereafter? 24 A. That's correct. 25 Q. Okay. Can you just describe in</p>	<p style="text-align: right;">Page 9</p> <p>1 litigation never do. So... 2 Q. So if we expanded the category 3 that I'm referring to to include both 4 lawsuits and potential lawsuits would you 5 say that most of your time was spent in 6 that category? 7 A. Yes. 8 Q. So you reviewed a number of 9 disparity studies in preparation for the 10 report that you submitted in this case and 11 a number of them were done by NERA, 12 correct? 13 A. Yes. 14 Q. And you were involved in at 15 least a supervisory role with all of the 16 ones that were included in I think it's 17 table 2.1 of your report? 18 A. Of the NERA studies? 19 Q. That's what I meant. I 20 apologize. Yes. Of the NERA studies? 21 A. Yes. 22 Q. And were you involved in other 23 than a supervisory role in some of them? 24 A. What -- I don't understand what 25 you mean.</p>

<p style="text-align: right;">Page 86</p> <p>1 statistical significance?</p> <p>2 A. Some of them probably were, but</p> <p>3 that's not presented in the table.</p> <p>4 Q. And I take it all of the NERA</p> <p>5 studies that are included in table 2.8 at</p> <p>6 least use the same methodology for</p> <p>7 calculating disparity indexes or ratios;</p> <p>8 is that right? I'm sorry.</p> <p>9 A. Is all the NERA studies?</p> <p>10 Q. Sorry?</p> <p>11 A. The same methodology --</p> <p>12 Q. There were 21 NERA studies</p> <p>13 included in table 2.8, right?</p> <p>14 A. No. I don't know if all 21</p> <p>15 studies had those particular categories</p> <p>16 but that would be the most that could be</p> <p>17 and -- but all the NERA studies use,</p> <p>18 basically, the same approach to measuring</p> <p>19 disparity.</p> <p>20 Q. That's what I was asking. Thank</p> <p>21 you. So -- and just make sure I</p> <p>22 understand the numbers here. In the</p> <p>23 employment services category there was</p> <p>24 54 percent of the disparities for</p> <p>25 minorities were less than a hundred and</p>	<p style="text-align: right;">Page 88</p> <p>1 A. I pulled out data for everybody</p> <p>2 from the reports.</p> <p>3 Q. Right.</p> <p>4 A. So I -- yes.</p> <p>5 Q. Okay. So why didn't you include</p> <p>6 observations including nonminority,</p> <p>7 female-owned companies in tables 2.2</p> <p>8 through 2.8?</p> <p>9 A. My understanding is they're not</p> <p>10 relevant to the 8(a) program.</p> <p>11 Q. So I guess the question I want</p> <p>12 to ask as a follow up is this: When you</p> <p>13 see disparities in a group that includes</p> <p>14 women, how do you know that disparities</p> <p>15 are not caused by sex instead of race?</p> <p>16 A. Not sure I understand the</p> <p>17 question.</p> <p>18 Q. Okay. Let me see if I can think</p> <p>19 of a better way to phrase it. Let me try</p> <p>20 it this way: So when you see in table 2.2</p> <p>21 that there was a 78 percent of the</p> <p>22 disparities that you observed for Asians</p> <p>23 were less than or equal to 80 whereas only</p> <p>24 7 percent of the disparities you observed</p> <p>25 for nonminority males were less than or</p>
<p style="text-align: right;">Page 87</p> <p>1 61 percent of the disparities for</p> <p>2 nonminorities males were less than a</p> <p>3 hundred; is that right?</p> <p>4 A. That is correct.</p> <p>5 Q. I think you've sort of answered</p> <p>6 this before but I'm going to ask it</p> <p>7 anyway, does any of the underlying studies</p> <p>8 for table 2.8 account for any other</p> <p>9 factors that may account for the</p> <p>10 disparities, like capacity?</p> <p>11 A. What do you mean by "capacity"?</p> <p>12 Q. The ability of a firm to do</p> <p>13 larger contracts?</p> <p>14 A. Measured how? No.</p> <p>15 Q. You may not have -- you may have</p> <p>16 decided not to measure it. I'm just</p> <p>17 asking whether you made any effort to do</p> <p>18 so?</p> <p>19 A. I don't know that it could be</p> <p>20 measured but that is not part of our</p> <p>21 availability measure.</p> <p>22 Q. Okay. All right. When you did</p> <p>23 the coding, you did do coding for</p> <p>24 nonminority, women-owned companies,</p> <p>25 correct?</p>	<p style="text-align: right;">Page 89</p> <p>1 equal to 80, how do you know that isn't</p> <p>2 caused by the fact that there's</p> <p>3 discrimination against woman-owned firms,</p> <p>4 which were included in the Asian category</p> <p>5 but not in the nonminority male category?</p> <p>6 A. Because then the -- my</p> <p>7 regression analyses in the final section</p> <p>8 of the document would show coefficients</p> <p>9 that are neither large or adverse nor</p> <p>10 insignificant for minorities and the</p> <p>11 opposite for by sex and they do not. I'll</p> <p>12 leave it at that.</p> <p>13 Q. That's fine, but I just</p> <p>14 want -- let's say I didn't have those</p> <p>15 other parts of your study, how would I</p> <p>16 know that the differences that we're</p> <p>17 seeing here in the numbers weren't caused</p> <p>18 by the inclusion of woman-owned firms in</p> <p>19 the Asian categories and their exclusion</p> <p>20 in the nonminority male category?</p> <p>21 A. I think that's exactly how you</p> <p>22 do know is you turn to other evidence that</p> <p>23 allows you to tease out those factors.</p> <p>24 Q. Okay. But this by itself</p> <p>25 wouldn't tell you that?</p>

23 (Pages 86 - 89)

<p style="text-align: right;">Page 94</p> <p>1 Mischaracterizes his prior testimony. 2 MR. ROSMAN: I'm not trying to 3 mischaracterize it. I'm just asking a 4 question and putting a question mark 5 at the end of it. 6 A. The disparities don't tell you 7 whether the -- the disparities you're 8 seeing are specific individual actors 9 inside the government or outside the 10 government causing them or larger 11 institutional forces causing them or both 12 or actors in the private sector, not 13 naming names as the case may be. 14 Q. And the same would hold true 15 about the federal government, is that 16 right, you wouldn't be able to make any 17 determination about whether or not the 18 federal government was discriminating 19 based on the analysis in part one of your 20 report? 21 A. I don't think that's ever the 22 purpose of any of these disparity studies, 23 but I -- so I would say that's correct. 24 MR. ROSMAN: So this is not an 25 actual terrible time for we here on</p>	<p style="text-align: right;">Page 96</p> <p>1 of the answers that are provided in these 2 surveys? 3 A. That's a question you have to 4 ask the census bureau. Generally their 5 surveys are the most professionally, 6 comprehensive, high quality that we get, 7 but -- so I -- you know, and some of the 8 data isn't asked as a question. So for 9 example, the SBO data, some of it is 10 collected from tax records. So -- 11 Q. Okay. So the -- that actually 12 was my next question. So they don't 13 actually ask people their salaries; is 14 that right? 15 A. You've got two different surveys 16 with a bunch of different elements and 17 questions in them. So I'd have to refer 18 you to the methodology documents for both 19 those surveys to really give you a correct 20 answer and -- 21 Q. Okay. Well, let me ask more 22 generally for economists -- well, let me 23 just ask you your opinion. Is survey 24 evidence generally considered reliable? 25 A. I considered this data here</p>
<p style="text-align: right;">Page 95</p> <p>1 the east coast to take a break for 2 lunch, but I know it's a little early 3 there for you. So why don't you tell 4 me what your preference would be? 5 THE WITNESS: I would defer to 6 the majority of people on this call 7 who are all on the east coast so that 8 certainly precludes me. 9 (Whereupon, an off-the-record 10 discussion was held.) 11 (Whereupon, a lunch break was 12 taken.) 13 Q. Welcome back. Dr. Wainwright, I 14 probably should have asked this question 15 at the beginning but we're not recording 16 so just state for the record your race and 17 ethnicity? 18 A. Non-Hispanic, white. 19 Q. So we're going to move into the 20 second part of your report and surveying 21 the business owners and the annual 22 business survey. 23 And my first question has to do 24 with how the census bureau collects this 25 data. Is there any check on the accuracy</p>	<p style="text-align: right;">Page 97</p> <p>1 highly reliable. I mean that's the 2 census -- the decennial census is a survey 3 in that sense so -- you know, and... 4 Q. Okay. This is more detailed 5 questions though than the general census, 6 correct? 7 A. The general census asks a lot of 8 detailed questions. So I don't know if 9 that's necessarily correct, but it is some 10 different questions. 11 Q. What are the different 12 questions? 13 A. There's a question on the 14 decennial census about whether your 15 household has running water -- you know. 16 There's questions on the SBO about whether 17 about -- you know, how you've capitalized 18 your business. They're asking different 19 questions on different subjects for 20 different reasons. 21 Q. But they -- so for example, on 22 how you capitalize your business, the 23 census bureau doesn't do anything to check 24 accuracy on the answers provided? 25 A. I'm not sure that's true at all.</p>

25 (Pages 94 - 97)

<p style="text-align: right;">Page 106</p> <p>1 A. Well, the American Indian and 2 Alaska Native category is about five times 3 bigger. I'd probably say definitely 4 smaller than that category, but again, I 5 wouldn't -- I couldn't tell you the number 6 for sure without checking it out. 7 Q. So most of the omitted firms 8 were nonminority women-owned businesses? 9 That is to say -- and by omitted firms I 10 mean included with all firms, but not 11 separately identified as a line? 12 A. I want to say, and without going 13 back and checking I can't say for sure, 14 but I think the SBO actually their 15 category is women as a whole. So that 16 would be minority and nonminority women as 17 their line item. 18 So -- you know, then those 19 numbers really would never add up to 100 20 percent because as you pointed out earlier 21 the minority categories have males and 22 females in there, but I think the SBO -- 23 and I could be wrong I'd have to double 24 check, but I don't think their line 25 item -- I think their line item was for</p>	<p style="text-align: right;">Page 108</p> <p>1 or other publication restrictions, but I'm 2 not sure to what part of the chart that 3 applies. Maybe you could identify it for 4 me? 5 A. I -- you'll actually in this 6 chart, which is all industries for the 7 United States as a whole, it doesn't show 8 up. It does show up in the next table in 9 some categories so that probably didn't 10 have to be in that note, but the business 11 bureau won't publish data if it's in such 12 a small category that it might allow 13 somebody to identify individual 14 respondents. 15 Q. So it's applicable to table 16 3.2, but not this table; is that right? 17 A. Yes. 18 Q. Okay. So there's also -- I 19 think we spoke about capacity measures 20 earlier on. There's no effort in this 21 chart at least to try to control for any 22 measure of capacity; is that right? 23 A. Again you're not defining 24 capacity so I'm not sure -- 25 Q. Let me rephrase. You know, the</p>
<p style="text-align: right;">Page 107</p> <p>1 women, period, and not nonminority women. 2 Q. Okay. Well, I guess I have the 3 same -- let me just make sure I understand 4 it. Women-owned firms -- a firm owned by 5 Hispanic woman would be included in the 6 Hispanic category? 7 A. Yes. 8 Q. And so if we included the all 9 women firm it would add up to something 10 more than 100 percent? 11 A. I think that's right. 12 Q. So and -- well, I guess you're 13 going to have the same question I asked 14 before which is, how do we know from this 15 chart that any disparities that you see 16 are not attributable to sex? 17 A. Well, you're free to look at 18 this chart in isolation. That's not how I 19 did it. As an economist the document I 20 look at as a whole. It's a good question 21 and one I try to tackle directly in the 22 next section. 23 Q. Okay. So the last part of the 24 footnote says that, N-A indicates the data 25 was not disclosed due to confidentiality</p>	<p style="text-align: right;">Page 109</p> <p>1 ability to do a job as capacity because of 2 your capital or your number of employees 3 or something like that. So let's call it 4 ability to do the job and define it that 5 way. 6 A. Well, there's a number of 7 columns in this table that speak to that. 8 There's -- it shows you firms -- column 9 three is just firms with paid employees as 10 opposed to column one, which is all firms; 11 column five shows you the number of 12 employees; column six shows the payroll 13 levels. So there's all kinds of... 14 Q. Maybe I need to rephrase the 15 question then. The disparity indices 16 don't take that into account though, 17 right? 18 A. The some -- vague idea of the 19 ability to do work, no. 20 Q. Okay. Well, I mean let me give 21 you an example. Your -- by the way before 22 I do that, panel C says these are 23 disparity ratios. Can you tell me why you 24 put disparity ratios instead of disparity 25 indices?</p>

<p style="text-align: right;">Page 130</p> <p>1 way.</p> <p>2 So it is -- it's just a way to</p> <p>3 create a forward picture of where these</p> <p>4 disparities exist and what factors do and</p> <p>5 do not explain them, but that really is</p> <p>6 -- the main reason is that moving up</p> <p>7 through occupational hierarchies in</p> <p>8 different industries often leads</p> <p>9 to -- business ownership is often the end</p> <p>10 stage of that.</p> <p>11 So if there's -- if there's</p> <p>12 discrimination at lower levels that can</p> <p>13 suppress the emergence of business owners.</p> <p>14 Q. And the disparities that you</p> <p>15 have identified with respect to salaries</p> <p>16 and wages in this part of your report, do</p> <p>17 you think they reflect any specific kind</p> <p>18 of discrimination?</p> <p>19 A. No. I think they reflect an</p> <p>20 amalgam of all -- can -- you know, you</p> <p>21 remember in this first section we're</p> <p>22 looking at unadjusted disparities, but</p> <p>23 they can -- what we're looking at here is</p> <p>24 the end result.</p> <p>25 They can -- they could reflect</p>	<p style="text-align: right;">Page 132</p> <p>1 assume -- let me start again.</p> <p>2 Is it fair to say that you</p> <p>3 assumed that the desire to own a business</p> <p>4 was consistent across the various races</p> <p>5 that you studied?</p> <p>6 A. I would put it -- that's close.</p> <p>7 I would put it somewhat different. I have</p> <p>8 no reason to assume they should differ in</p> <p>9 any -- you know, from individual to</p> <p>10 individual, yes, but should they differ by</p> <p>11 race, I have no reason or evidence to</p> <p>12 suggest that they should or do.</p> <p>13 Q. Do you think the disparities</p> <p>14 that you identified in business formation</p> <p>15 reflect any kind of specific</p> <p>16 discrimination?</p> <p>17 A. I'm not testing for specific</p> <p>18 kinds of discrimination. As an economist</p> <p>19 what I'm trying to do is look to see if</p> <p>20 there's quantitative differences in</p> <p>21 economic outcomes by race that aren't</p> <p>22 accounted for by differences in</p> <p>23 productivity, such as endowments of</p> <p>24 human capital and financial capital.</p> <p>25 But which specific actors or</p>
<p style="text-align: right;">Page 131</p> <p>1 discrimination in a variety of arenas, but</p> <p>2 particularly in the labor market.</p> <p>3 Q. So when you say in the labor</p> <p>4 market, you mean by employers?</p> <p>5 A. Well, not all discrimination is</p> <p>6 by individuals, but it could -- you've got</p> <p>7 job training programs, you've got</p> <p>8 government programs that affect the labor</p> <p>9 market, you've got specific employers,</p> <p>10 you've got customers. So yes but not</p> <p>11 exclusively employers.</p> <p>12 Q. Okay. With respect to business</p> <p>13 formation, how do you control for an</p> <p>14 individual's desire to own a business, if</p> <p>15 you can?</p> <p>16 A. I have no measurement of desire.</p> <p>17 Q. You think that's an important</p> <p>18 omission?</p> <p>19 A. If there were reason to believe</p> <p>20 that minorities and nonminorities were</p> <p>21 substantially different in being desirous</p> <p>22 to own businesses, possibly. I'm aware of</p> <p>23 no research to that effect, but it's not</p> <p>24 something I can measure.</p> <p>25 Q. Okay. Is it fair to</p>	<p style="text-align: right;">Page 133</p> <p>1 institutional mechanisms may be driving</p> <p>2 that is not something I've tried to</p> <p>3 determine here.</p> <p>4 Q. Is there anything in the PUMS</p> <p>5 data that indicates how many hours per</p> <p>6 week or per month a person is devoting to</p> <p>7 his or her business?</p> <p>8 A. Yes.</p> <p>9 Q. Did you -- how did you take that</p> <p>10 into account in doing your regression</p> <p>11 analyses of business earnings?</p> <p>12 A. Well, the earnings measured in</p> <p>13 this report is annual earnings. So if a</p> <p>14 person was working 40 hours a week,</p> <p>15 52 weeks a year, that's reflected in their</p> <p>16 earnings.</p> <p>17 If they're working 26 weeks a</p> <p>18 year, 20 hours a week, that's also</p> <p>19 reflected --</p> <p>20 Q. Well, I guess I'm asking whether</p> <p>21 you included how many hours they worked as</p> <p>22 an independent variable that helps to</p> <p>23 explain the dependent variable?</p> <p>24 A. No. Because the dependent</p> <p>25 variable is already incorporating that</p>

<p style="text-align: right;">Page 134</p> <p>1 because it's your total earnings for the 2 year. So to also control for weeks and 3 hours would not be correct. 4 Q. I'm not sure I understand. So 5 I'll ask the question in a different way. 6 If somebody is only working half 7 time for their business, that might 8 explain why they're only earning half as 9 much money, right? 10 A. That would be reflected in their 11 annual figure. 12 Q. Right. And so including it as 13 an independent variable might help explain 14 some of the variation in their annual 15 figures, right? 16 A. I'd have to give that some more 17 thought, but I think because it's already 18 built into the annual earnings figure that 19 it would be inappropriate to also control 20 for weeks or hours but that's a question 21 I'd have to give some more very specific 22 thought to. 23 Q. I take it you didn't include 24 that data point in your regression 25 analysis; is that right?</p>	<p style="text-align: right;">Page 136</p> <p>1 observations that would -- that you 2 managed to collect for purposes of these 3 tables? 4 A. In part, yes. It's a very large 5 data set. 6 Q. In the PUMS analysis in all 7 three categories that you examined, can 8 you tell us who you think is doing the 9 discriminating that causes the 10 disparities? 11 MS. DINAN: Objection. Calls 12 for speculation. 13 A. Oh, I was going to say asked and 14 answered. I thought that's been asked 15 before and I cannot. 16 Q. I asked with respect to specific 17 parts and now I'm just trying to sort of 18 wrap up here. 19 A. No. I can't and again if it's a 20 culmination of overdiscrimination (sic) by 21 individual actors or more institutional 22 discrimination through social and economic 23 mechanisms or all of the above may be the 24 case, but I can't pinpoint that with this 25 data.</p>
<p style="text-align: right;">Page 135</p> <p>1 A. Hours and weeks were not a -- on 2 the right-hand side of the equation, 3 that's correct. 4 Q. Okay. You also -- you used age 5 as a substitute for experience; is that 6 right? 7 A. Yes. There's a proxy. 8 Q. Well, isn't it the case that 9 people of different ages can 10 have -- excuse me -- people of the same 11 age can have vastly different amounts of 12 experience in a particular field? 13 A. Sure. That's why it's a proxy 14 and not -- there's no measure of actual 15 experience. Just like a measure of desire 16 to own a business, that I'm aware of, and 17 certainly not in the PUMS data. 18 Q. Okay. So there -- if I just go 19 to the charts, you can look at any of the 20 tables, it doesn't really matter, there's 21 a lot of statistical significance here, a 22 lot of numbers that have very high 23 statistical significance. 24 And my question is: Is that a 25 reflection of the large numbers of</p>	<p style="text-align: right;">Page 137</p> <p>1 Q. So in the text of this part, 2 Dr. Wainwright, you make a lot of 3 comparisons between various minorities and 4 nonminority men, right? 5 A. Yes. 6 Q. And my question is: Why didn't 7 you include all nonminorities and in the 8 case of business owners all 9 nonminority-owned companies? 10 A. I use nonminority males as the 11 reference group and if -- you don't see it 12 in these tables, but if you look in the 13 appendix nonminority women were already 14 included in the regression as a separate 15 variable. 16 Q. Right. But I'm just 17 asking -- well, all of these -- well, I 18 guess why didn't you include a 19 comparison -- some of the comparisons 20 might be explained by sex, right? 21 A. Sex is already explicitly 22 accounted for in these regression logs. 23 Q. Let me just be explicit then. 24 On page 60 I'm reading from the second 25 full paragraph, the ACS PUMS shows that on</p>